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# NUMBERS & ODDITIES #
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-::: N&O #47, March 2002 :::-

ATTENTION, YAHOO.COM USERS!!!

As it seems to be impossible to get rid of the never ending spam diarrhoea from (fake) yahoo.com e-mail addresses (about a dozen per day), I have no other option than to put yahoo.com in my spam filter. If you have a yahoo.com e-mail address and want to send me something for the column, please use ary27263665@icqmail.com instead of my regular address. THANKS!

-0-0-0-0-0-0-0-0-0-0-

Again a very busy month and hardly time for the hobby and N&O. Luckily I received an interesting article about Shortwave transmitter sites in the Greater Frankfurt am Main area, written by Andreas Erbe and Wolfgang Bueschel. Beside the article, you'll find the usual numbers round-up and logs. Thanks to all who contributed to N&O.

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★ VOICE STATIONS ★

::: E03 - LINCOLNSHIRE POACHER

Al Kruse compiled the monthly E03 id list, and he noticed an oddity as well. On Saturday, 3 March, LP used 5442 kHz instead of 5422 at 1900 UTC. A blooper? They were back on 5422 the next week.

E03 id's; first half of the month:

UTC	Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC
1200	65764	65764	65764	65764	65764	65764	65764	1200
1300	74365	74365	74365	74365	74365	74365	74365	1300
1400	33486	81464	55639	51033	65764	09275	58898	1400
1500	58898	33486	81464	55639	51033	65764	49491	1500
1600	49491	58898	33486	81464	55639	51033	09275	1600

1700	09275	49491	58898	33486	81464	55639	65764	1700
1800	65764	09275	49491	58898	33486	81464	51033	1800
1900	51033	74365	09275	74365	58898	33486	74365	1900
2000	74365	65764	74365	49491	74365	58898	55639	2000
2100	55639	51033	65764	09275	49491	74365	81464	2100
2200	81464	55639	51033	65764	09275	49491	33486	2200

Second half of the month:

UTC	Mon	Tue	Wed	Thu	Fri	Sat	Sun	UTC
1200	36572	36572	36572	36572	36572	36572	36572	1200
1300	81949	81949	81949	81949	81949	81949	81949	1300
1400	44753	49653	51028	67923	36572	69264	09393	1400
1500	09393	44753	49653	51028	67923	36572	81371	1500
1600	81371	09393	44753	49653	51028	67923	69264	1600
1700	69264	81371	09393	44753	49653	51028	36572	1700
1800	36572	69264	81371	09393	44753	49653	67923	1800
1900	67923	81949	69264	81949	09393	44753	81949	1900
2000	81949	36572	81949	81371	81949	09393	51028	2000
2100	51028	67923	36572	69264	81371	81949	49653	2100
2200	49653	51028	67923	36572	69264	81371	44753	2200

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::: E06

Only a few logs from E06 and S06 this month. No E07 or S07 were reported.

1-3, 2100 UTC, 7785 kHz
 1-3, 2200 UTC, 6785 kHz
 3-3, 1230 UTC, 15880 kHz
 3-3, 1330 UTC, 13520 kHz
 9-3, 2100 UTC, 9090 kHz, 304 00000
 13-3, 0300 UTC, 6865 kHz
 16-3, 1230 UTC, 15890 kHz, 584 + msg
 16-3, 1330 UTC, 13520 kHz, 584 + msg
 17-3, 1230 UTC, 15880 kHz, 584 + msg

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::: E10 - ISRAELI INTELLIGENCE

E10 produced a number of strings this month, not as much as a couple of months ago, but still interesting. Fabrizio, Tomonori, Adachi and John reported the following strings:

CI02Z23 on 5339 and 8127 kHz, 10-3, 1502 UTC

CI025Z23 on 5339 kHz, 9-3, 1547 UTC
EZI1 on 11565 kHz, 28-2, 2101 UTC
SYNRDJNM on 8641 kHz, 11-3, 2335 UTC
ULX3 on 4881 kHz, 17-3, 1802 UTC
VLB2Z77 on 5170 kHz, 19-3, 0449 UTC
VLB3 on 4015 and 5170 kHz, 24-3, 2150 UTC
YHF1 on 7918 kHz, 1-3, 0202 UTC

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::: G04 - THREE NOTE ODDITY

ENIGMA's Paul Beaumont reports G04 on 4852 kHz at 2135 UTC on 7 March.
He heard the full identification. The three notes at beginning, then
"Achtung, Achtung, 84821" etc. Message continued until 2148 UTC.

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::: S06

9-3, 1700 UTC, 14620 kHz, 351 + msg
9-3, 1800 UTC, 12210 kHz, 351 + msg

<<<<<>>>>

::: S17C

Still alive and kicking with a daily sked at 1250 UTC on 6945 and 8190
kHz.

<<<<<>>>>

::: V21

The Cuban babbler is a daily guest on 6529 kHz. Mostly heard during
the American daytime

-0-0-0-0-0-0-0-0-0-0-

* MORSE STATIONS *

::: M18

Thanks to Takashi's tip, I heard M18 4073 kHz after a long absence.
The signal was very faint. The time transmitted was UTC+3.

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::: M21 - RUSSIAN AIR DEFENSE

The Russians were heard on 4071.5, 5371, 5372, 5921.5, 6906.5 kHz with the usual "BT99" time markers and plots.

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::: M23

M23 was as active as ever and was heard with id's 000, 310, 555 and 579. All logs are from Mark. Id's were repeated for 10 minutes.

Id 000: 5-3, 0330 UTC, 10220 kHz

Id 310: 1-3, 0100 UTC, 10250 // 11020 kHz
1-3, 0130 UTC, 8160 kHz
1-3, 0200 UTC, 7960 kHz
1-3, 2200 UTC, 7770 kHz
2-3, 0200 UTC, 7960 // 10110 kHz
2-3, 0430 UTC, 12220 kHz
3-3, 0100 UTC, 11020 kHz
3-3, 0430 UTC, 12220 // 13140 kHz
3-3, 1700 UTC, 11020
4-3, 0100 UTC, 10250 // 11020 kHz
4-3, 0130 UTC, 8160 kHz
4-3, 0200 UTC, 7960 kHz
19-3, 0130 UTC, 8160 kHz

Id 555: 2-3, 0230 UTC, 10110 // 11220 kHz
2-3, 0300 UTC, 7770 kHz
2-3, 2200 UTC, 7770 // 8160 kHz
3-3, 2200 UTC, 7770 kHz
4-3, 2200 UTC, 7770 // 8160 kHz
5-3, 0300 UTC, 7960 kHz
8-3, 2200 UTC, 7770 kHz
9-3, 2200 UTC, 7770 // 8160 kHz
10-3, 2200 UTC, 7770 kHz

Id 579: 4-3, 0800 UTC, 8307 // 9285 kHz

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::: M40

More reports from Igor:

6290 kHz, 1432 UTC, 6 March:

vvv cq 211,432 (repeated)
vvv cq432 cq432 cq432
hr hr 21 21 = =
52633 9219t 32885 97396 39369 79t22 251t4 6278t t91t4 81435
11459 t129t 69274 18382 238tt 84536 76892 67t83 515t2 4176t
98t83 ar ar
rpt rpt
vvv cq432 cq432 cq432
hr hr 21 21 = =
52633 9219t 32885 97396 39369 79t22 251t4 6278t t91t4 81435
11459 t129t 69274 18382 238tt 84536 76892 67t83 515t2 4176t
98t83 ar ar
sk sk

5600 kHz, 1304 UTC, 6 March:

vvv cq 113,141 (repeated)
vvv cq141 cq141 cq141
hr hr 21 21 = =
t8748 91t92 4218t 19123 5354t 84535 19t59 17518 42257 411*9
59487 8245t t1185 98t71 96311 6522t 58339 t7187 43t78 154t9
11t7t ar ar
rpt rpt
vvv cq141 cq141 cq141
hr hr 21 21 = =
t8748 91t92 4218t 19123 5354t 84535 19t59 17518 42257 411*9
59487 8245t t1185 98t71 96311 6522t 58339 t7187 43t78 154t9
11t7t ar ar
sk sk

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::: M82

Heard on 4700 kHz at various dates and times with "VVV ... de BML"
calls and messages.

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::: MX - CLUSTER BEACONS & CHANNEL MARKERS

A, unid location, on 4558 kHz.

AAINNM, unid location, on 4558 kHz. Defective 'M'?

C, Moscow, on 4558 kHz.

E, unid location, on 4558 kHz.

F, Vladivostok, on 4558.2, 7039.2, 8494.2, 13528.2, 16332.2 kHz.

K, Petropavlovsk Kamchatskiy, on 5154, 10872 kHz.

L, St. Petersburg, on 3340 kHz.

M, Magadan, on 4558, 5154, 7039, 8495, 10872, 13528 kHz.

R, Izhevsk, on 3195, 4326, 5466 kHz.

Trond recorded a voice message on 5465 kHz at 2100 UTC on 26 March.
You can download it from the N&O site.

S, Arkhangelsk, on 10871.9, 20047.9 kHz.

T, unid location, 4558 kHz.

TEEEEE, unid location, on 4558 kHz. Defective 'M'?

V, Khiva, on 3658, 4498.5 kHz.

<based on reports from Takashi, Trond and Tomoroni>

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::: CHINESE STATIONS

"V CP17 CP17 CP17 DE L9CC L9CC" on 3536.5, 3543.5, 3551, 3554, 3556,
3561, 5423, 7045.5, 7050, 7051.5, 7053, 7059, 7068.5 kHz.

"V MW3D MW3D MW3D DE 2SLC 2SLC" on 3330, 7074 kHz.

"V BFR7 BFR7 BFR7 DE 4XML 4XML" on 3380, 5645, 5756, 8189.5, 8308,
10822 kHz.

"V GM1W GM1W GM1W DE B7UA B7UA" on 4415 kHz.

"V IBEH IBEH IBEH DE L3FC L4FC" on 4771.5. 6506.5 kHz.

"V LA5H LA5H LA5H DE NH8T NH8T" on 4874, 5383, 5756, 7310, 8042 kHz.

"V JS4X JS4X JS4X DE 6DU0 6DU0" on 6982 kHz.

"V HNR2 HNR2 HNR2 DE CN9R CN9R" on 9071 kHz.

<All logged by Takashi>

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::: RUSSIAN MILITARY STATIONS

John A. Cramer copied a number of Russian stations:

OLZ2 working with BDZX and JBQ6 on 13004 kHz. QSX 13844 kHz.

IP5Y: radio checks with 4SC2, 7I3P, NNPR, L38N, OR0D, A5KZ, X2AK, G6MG, FBFK and coded messages to A5KZ on 13853 kHz.

RAL2: radio checks with RFH2, RHW2, RDU2, RBL62 on 13975 kHz.

QYVG: radio checks with TP8P, XMSC, AVGJ, CIEF, 4EIU, YEFA, AOS7, C95U, 4FDV on 13852 kHz.

Our LF specialist, Trond, caught a number of flash messages on 18.1 kHz, 21.1 kHz, and 13852 kHz:

UUU XXX XXX M8H8 M8H8 WRNU WRNU SVQZ SVQZ 10193 KORKONT 8503 3052 K

XXX XXX RKS RKS 90250 WORSOWANIE 7967 8801 WERWEY 4647 4739 K

XXX XXX RDL RDL 02428 59742 OBSAD 5308 4731 K

UUU UUU XXX XXX RJD52 RJD52 59993 TARN0BOJKA 4712 7237
UUU XXX XXX RJD52 RJD52 59993 TARN0BOJKA 4712 7237 K

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::: 248

An interesting unid station was reported by Igor. He heard "248" on 6852 kHz at 1500 UTC on 6 March. The format was a bit unusual as both long and short zero's were used. Check the N&O website for a MP3 of the transmission.

248 248 248 000 000 (long zero's)
248 248 248 000 000
248 248 248 000 000
248 248 248 000 000
248 248 248 000 000
248 248 24 t t t (short zero's)

<<<<<>>>>

::: UNID STATIONS

3195 "JJT88 DE JJT44 QRK 4 K", presumed Japanese military net.

3419 Unid, repeating "U849"

3551 Unid, repeating "VVV EVX"

7630 Unid, repeating "HHH"

7864 Unid, repeating "V CQ DE 3SP ZNN"

<All heard in Japan by Takashi>

-0-0-0-0-0-0-0-0-0-0-

★ OTHER MODES ★

::: XP / XPH

The expected morning sked for April is 808:

0600 UTC, 10893 kHz

0620 UTC, 12093 kHz

0640 UTC, 13893 kHz

The expected evening sked for April is 321:

2000 UTC, 13375 kHz

2020 UTC, 12207 kHz

2040 UTC, 11155 kHz

Two other transmissions outside the normal time slots were noted at 9 March at 1230 UTC on 21862 kHz, and at 1250 UTC on 20432 kHz.

Another schedule, with lower tones, was copied by Paul on 7 March:

2100 UTC, 9140 kHz

2120 UTC, 7610 kHz

2140 UTC, 6840 kHz

<<<<<>>>>

::: M42

It's a bit slow on the FAPSI reporting front. Only one log this month. Lars copied them on 14871 kHz where he heard a RTTY message on link 80038 after the Mazielka selcal at 1443 UTC. The transmission ended with some ops chat.

Has anyone heard any FAPSI activity from Cuba since the Russians pulled out?

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::: XT2 / XWP / XSW

XT2: The mysterious second pip and 3-tone marker were not reported in March. I wonder where they are now.

XWP: Still going strong on all frequencies as mentioned in last month's column.

XSW: The "Squeaky Wheel" channel marker is daily audible on 3828 kHz.

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::: HAARP

The message that HAARP would be active reached me via Trond and the actual logs came from Tom Severt.

HAARP, the High frequency Active Auroral Research Program, located at Gakona in Alaska, were performing their spring 2002 VLF injection campaign, during the period March 15th - March 28th. The transmissions were heard on 3.2 and 5.8 MHz.

The transmissions on 3.2 MHz consisted of 12.5 Hz on/off keying 50 % duty cycle. On 3.2 and 5.8 MHz chirp transmissions were announced and further sinusoidal modulation with the following frequencies; 1225 Hz, 1875 Hz, 2125 Hz, 2375 Hz, 3365 Hz.

Tom reports "I'm hearing the HAARP signal tonight (17 March). At 0826 I heard a steady AM carrier on 3200 with a tone. This was later replaced by quick dashes of the carrier on 3200. At 0837, the signal moved to 5800 and consisted of an AM carrier with various tones. Can't wait to get a QSL for this."

Let us know if you get one, Tom!

-0-0-0-0-0-0-0-0-0-0-

★ SHORTWAVE TRANSMITTER SITES ★

Shortwave transmitter sites in Greater Frankfurt am Main area
by Andreas Erbe and Wolfgang Bueschel

The city of Frankfurt is worldwide known as a city of bankers. With its

about 650,000 inhabitants, it attracts a lot of tourist visitors each year, though there is nothing particular to visit - in contrast to many other towns in Germany. The radio history of this part of Germany is not well documented therefore a part of it, namely the chapter of shortwave transmitters, will be discussed here. The AM-transmitter sites other than shortwave will be mentioned only, and the history before 1945 will not be dealt with at all. Why can this be of interest to the number station enthusiast? On the one hand, famous DFC37 and DFD21 originated from that area, and E5 sent out some transmissions there.

- Historic Background

It all started with the American occupation of a big part of what is today South Germany after World War II ended in 1945. And of course at this time, there was a need for every power present in Germany to communicate with the homeland. Since the main transmitter sites of Germany were located around Berlin, associated with the names Koenigs Wusterhausen and Nauen, the Western powers had less chances to take over old transmitter equipment.

The British zone in North Germany had the transmitters in Elmshorn near Hamburg. So there was a base for shortwave communication. On the other hand, in the American zone only around Munich a few broadcast transmitters were left. And to communicate with the American mainland, shortwave communication sites were urgently needed. Being an economic centre for a long time, Frankfurt and the surrounding area was well suited to house these new sites. And Frankfurt was a broadcasting centre, too.

- Transmitter sites of Hessischer Rundfunk

The regional public broadcaster for the state Hessen is Hessischer Rundfunk (HR). HR was set up in 1948 as part of the new federal radio system in West Germany. It was the successor of Radio Frankfurt which started operating in 1945 under US American control [1]. All over West Germany, the newly formed regional broadcasters took over control of their transmission facilities from the German Post.

In those days, HR operated an own shortwave transmitter. This one started broadcasting in late 1947. The 1-kW-unit made by Lorenz operated only until 1954, when it was dismantled [2]. The frequency was 6190 kHz (48.47 m) which was later used by Radio Bremen till 1996 and at present is used by Deutschlandfunk from the site at Berlin-Britz. The transmitter was located at the site Heiligenstock in North Frankfurt, Friedberger Landstrasse 525 at 08E43, 50N09. This facility housed also a medium wave transmitter of HR. The original transmitter (synchronized network on 1195 kHz with 25 kW) from 1935 was severely damaged in March 1945. A provisional repaired facility served for Radio

Frankfurt after the war was over. AFN also used the Heiligenstock site for radio programmes. This part of the story will be presented later.

August 23rd saw the launch of the Lorenz-reconstructed original transmitter with a power output of now 100 kW serving until October 15th, 1967, when the Heiligenstock site was closed. The MW antenna installation consisted of four 121 m pipe masts. The site operated on a synchronized network with other sites in Hessen.

In those days, Radio Frankfurt and later Hessischer Rundfunk used 1439 kHz, while AFN was on 593 kHz until the Copenhagen HF plan became effective March 15th 1950. The HR moved from 1439 to 593 kHz while AFN left 593 kHz for the new 935 kHz with 10 kW. For the close-down of transmissions from the Heiligenstock site, the official reason was that the city of Frankfurt wanted to build flats on the ground where the facility was located, and therefore asked HR to look for a new site in the late 1950s. But up to now, no new building can be seen on the ground of the former transmitter facility. Another reason was the old transmitter having problems operating 24h a day ñ so a new transmitter to be planned anyway. October 16th, 1967 saw the start of transmissions from the newly erected site in Weiskirchen-Rodgau, located 15 km south west to Frankfurt. Two masts, each of which 126 m high, were erected there. This site still operates on 594 kHz. Some pictures and historical information in German can be found on Hansjoerg Biener's website [3].

- Sites of Deutsche Bundespost (DBP)/Telekom

In West Germany, the broadcast transmitters were handed over from the post to the regional broadcasters in 1946/1947. Later almost all broadcast transmitters were operated by the broadcasters. Exceptions were Deutsche Welle and Deutschlandfunk later. Both used transmitters operated by the West German Post, Deutsche Bundespost (DBP). All utility service transmitters were operated by DBP. As the British and US zone of Germany united to a unified economic "bizonie" in 1946, there was also only one headquarter of the Post, which was located in Frankfurt. This was one reason why new communication capabilities were needed in the Frankfurt area.

Subsequently, three communication facilities were built in the end of the 1940s in Hessen. One was located at Mainflingen. This one only operated on longwave and later housed broadcasting MW transmitters. The other two facilities at Frankfurt-Bonames and Usingen-Merzhausen were intended for shortwave communication. One transmitter site was needed to improve reception of news agency transmissions from the coast station Norddeich Radio (North Sea coast) in North Germany. So a place near Mainflingen, 25 km southeast to Frankfurt was chosen to set up a new longwave transmitter. The first transmission hall was erected in 1950.

The first user was the press agency, and over the years, the meteorological service was the main user of this facility. Today the site today is more famous for the time signal station DCF77 on 77 kHz. Also broadcasters Deutschlandfunk and Evangeliumsrundfunk used and still use the facility [4].

The Mainflingen site never housed shortwave transmitters. The building-up of the transmitter facility at Frankfurt-Bonames in the north of Frankfurt started in late 1947. The first transmitter hall was set up in a former casino building. It housed 11 Lorenz-made shortwave transmitters. Six 20-kW units served as telegraphy transmitters, four 20-kW-units were used for single-sideband-(voice)-transmissions. An additional 5-kW transmitter was also installed.

From 1950 till 1952, a power supply backup was erected, and the second transmitter hall was build up. This hall was equipped with 6 Telefunken 20-kW-transmitters, four 5-kW Lorenz transmitters and in addition with 11 small 1.2-1.5-kW-units made by Lorenz. Two of these transmitters were longwave transmitters, whose purpose remains unclear.

In the mid 1960s, the small transmitters and two of the 5-kW units were dismantled and replaced by 9 modern automatic Telefunken transmitters with a power output of 20 kW. Most aerials on the Bonames site were rhombic ones, carried by 20 to 30 m high masts. Most of them beamed their signals to North America. There were also some nondirectional vertical antennae, quadratic dipoles and two logperiodics. The area of the Bonames site was located in densely populated area, and with the city of Frankfurt growing it was impossible to expand the site.

Therefore it was decided to close this facility. Transmitter hall 1 ceased operation in 1968. Most of the transmitters were scrapped and a few moved to North Germany to the site of Elbe-Weser-Radio. The modern Telefunken transmitters installed at the beginning of the 1960s in hall 2 were moved to Usingen. Most of the transmitters and antennae were scrapped, some moved to Usingen. Others were transferred to Elmshorn near Hamburg. In 1972 the complete Bonames site was silenced forever.

Only administrative tasks remained there [4]. The third site of DBP to be mentioned here is in Usingen-Merzhausen. The town of Usingen is located in the Taunus mountains 25 km north to the inner city of Frankfurt. More information can be found at Usingen's internet site [5]. A communications facility was erected at a former army airfield.

The West German post leased the area for 30 years beginning 1953 for this purpose. The first task was to clear the airfield from the remaining bombs of World War II. This took around 2 years. In late 1955 the set-up of the transmitters started as they should be operational by Christmas 1956. In 1958, fourteen 20 kW and four 100-kW-transmitters where operational, and the first transmitter hall was fully equipped.

Most antennae where rhombic antennae at that time. With the growing traffic on shortwave, an expansion of the station in Usingen was planned, and the building of a second transmitter hall started in 1965. Between 1967 and 1968 ten remote controlled transmitters with a power output of 20 to 30 kW were installed. With the closure of the

Bonames site 9 modern remote controlled automatic transmitters came to Usingen in 1970. In May 1976, 37 transmitters and 43 aeri-als operated in Usingen at its high. The new era of satellite communications started for West Germany in 1965 with the set-up of the earth station in Raisting near Munich. The closure of the shortwave facility in Bonames must be seen in this context too. The decline of shortwave activity lead to the dismantling of shortwave transmitters beginning in 1976. The last hand-operated transmitters were removed in 1982, and only 3 large rhombic antennae of the original 26 remained. By the end of 1989 all shortwave services were carried on by the site Elmshorn near Hamburg. Usingen became a famous satellite earth station instead. The first parabolic antenna as uplink transmitter was inaugurated in 1979. The building up of this antenna took about two years. Nowadays, more than 15 satellite antennae are operational at the Usingen site and no shortwave transmitters are left [7]. Information about the satellite earth station can be found on the internet pages of Deutsche Telekom [6]. So with the political changes in Europe in those days also the last commercial shortwave transmitter site in the Frankfurt region was closed.

- Site of Deutsche Nachrichtenagentur (DENA)

Immediately after World War II in each zone of Germany new news agencies were founded. The British zone got the DPD (Deutscher Pressedienst), in the American zone DENA (Deutsche Nachrichtenagentur) was founded and in the French zone the new SUEDENA (Sueddeutsche Nachrichtenagentur) sprang into life. Those three joined to form the West German "Deutsche Presseagentur" (DPA). The name of DENA, this time as Deutsche Nachrichten GmbH, remained present in the DPA as an affiliate, that operated services for the DPA. Deutsche Nachrichten GmbH was closed in 1997 and is now a company in liquidation [8]. DENA operated a transmitter for DPA on a neighbouring area to the HR site Heiligenstock, located half way between Frankfurt and the town of Bad Vilbel north to Frankfurt at Friedberger Landstrasse 645. It had a longwave transmitter to broadcast the DPA news service in German. This service seemed to have operated since the end of the 40s until the end of the 60s. Klingenfuss gives in his "OldFreq"-list a callsign of DCF 39 for fax transmissions on 139 kHz [9]. But also some shortwave transmitters of 20 kW transmitted DPA's English service worldwide in RTTY. It is reported that also the Japanese news agency JIJI Press was transmitted from DENA-transmitter Bad Vilbel. The site operated until the mid-1980s. To date, no literature source has appeared giving details of this facility. That's why we have to rely on the "collective memory" of the hobbyists. Today, the former transmitter hall seems to house a flat a family, and one part of the area is used for the graveyard of Bad Vilbel. The name "DENA-Sender" however is still present on the city maps of Frankfurt. It can e.g. be found in a map about the housing estates in Frankfurt [10].

- American transmitter sites

With the presence of US troops in the region also American transmitter sites have been built. American Forces Network (AFN) started medium wave transmissions via a 300 watt transmitter in April 1945, from IG-Farben sky scraper in the northern suburbs of Frankfurt am Main on 593 kHz. From June 1st, 1945 Radio Frankfurt Heiligenstock site was used for the AFN Frankfurt program via a provisional transmitter. As already mentioned, AFN changed to 935 kHz in 1950 with the new HF plan. This channel was in use until the new site in Weisskirchen was finished, some time between 1950 and 1952. Since then, AFN can be heard on 873 kHz in the Greater Frankfurt area. The transmitter site is located north of Frankfurt in Weisskirchen, part of the town Oberursel. The site just got a new 150-kW-transmitter in 1994. In 2000 the site became famous as a lightning damaged the set-up. More information including some pictures can be found at Hansjoerg Biener's web site [3]. But in addition also a military site exists south to Frankfurt which was used for shortwave communication maybe by the US Air Force. The site is located between Langen and Moerfelden-Walldorf, 15 km south to Frankfurt in a former forbidden zone. We do not know anything about the transmitters there, but there are several logarithmic-periodic and vertical antennae that are definitely intended for the use on shortwave. And there is a directional link connection to apparently the military part of Frankfurt's international airport. The real owner and what is transmitted there is subject of speculations. One user may be the US military - the site is not even listed on good maps.

- Number stations

Up to now some information has been presented about the transmitter sites in the Frankfurt area. What can the number station enthusiast do with this? There were several West German number stations: then BND family around Papa November and the Two-Letter-Stations as well as DFC37 and DFD21. As the latter both have callsigns in the country, they can be traced to a certain site. The ITU (1972) lists for both DFD21 and DFC37 as well as for the famous DFD78 ñ Deutscher Sportverlag the site Bonames [12]. So it is not surprising that the Bonames site is mentioned in conjunction with number station transmissions. But it stopped transmissions in 1972, so definitely afterwards transmissions of any kind did not originate from Bonames. At the beginning of the 1970s number station activity in Central Europe was at a peak level, and DFC37 as well as DFD21 continued afterwards. Simon Mason dates back their history starting at least at the beginning of the 1970's [13]. As Usingen took over not only the transmitters, but also the services it is likely that also the callsigns were transferred to Usingen. Indeed, listeners in the area report that Usingen definitely transmitted the typical West German number station format with the Two Letters. These

transmissions were around there even at the beginning of the 1960s, as Wolfgang Bueschel writes. But not only German number stations were around in the Greater Frankfurt area. As the CIA had one head of its West German arm there [14], the area is well suited to be a relay for E5's transmissions. There are reports that the site between Langen and Walldorf-Moerfelden is used for this, though up to now, no reliable reports confirm this.

- Acknowledgements

Thanks goes out to a lot of people for helping to collect the material for this short article. We thank Michael Bethge of the WWDXC as well as Gerd Klawitter and Karl-Michael Gierich for sharing their part of the collective memory of the radio hobbyists, as well as supplying articles and other material about the sites. The Museum of Post and Telecommunications in Frankfurt helped in research of some material. For the possibility of discussions about the technical material my thank goes to Kai Ludwig and Hansjoerg Biener. And we thank the "old" ENIGMA for the lots of material about transmitter sites not only of number stations it gave over the years of its existence.

- Abbreviations

AFN	- American Forces Network
DBP	- Deutsche Bundespost, West German Post
DENA	- Deutsche Nachrichtenagentur (news agency of the American zone until 1949) and Deutsche Nachrichten GmbH (affiliate of DPA)
DLF	- Deutschlandfunk
DPA	- Deutsche Presseagentur, (West-)German Press Agency
DPD	- Deutscher Pressedienst, news agency in the British zone until 1949
HR	- Hessischer Rundfunk, public broadcaster for Hessen
kW	- Kilowatt
MW	- Mediumwave
Suedena	- Sueddeutsche Nachrichtenagentur, news agency in the French zone until 1949
SW	- Shortwave
WWDXC	- Worldwide DX Club

- References

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- 2: Maes, L.: Transmitter Documentation Project TDP-SW97, 1997.
- 3: <http://www.asamnet.de/~bienerhj/rundfunk.html>.
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- 5: <http://www.usingen.de>.
- 6: http://www.telekom.de/dtag/ipl1/cda/level4s_a/0,3682,12287,00.html
- 7: Fernmeldeamt Eschborn: Erdfunkstelle Usingen.
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- 10: http://www.frankfurt.de/sixcms_upload/media/205/wohnlagen.pdf.
- 11: ITU Alphabetical Lists of Call Signs, 5th edition, March 1972.
- 12: Mason, S.: Secret Signals - The Euronumbers Mystery, Tiare Publications 1991.
- 13: Eichner, K., Dobbert, A.: Headquarters Germany, edition ost, Berlin 1997.
- 14: World Radio TV Handbook, 1950 and 1952.

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★ INTELLIGENCE PROFILE - BELGIUM AND LUXEMBOURG ★

BELGIUM

::: General information.

Belgium became independent from the Netherlands on 21-7-1831 and was occupied by Germany during World Wars I and II. It has prospered in the past half century as a modern, technologically advanced European state and member of NATO and the EU. Tensions between the Dutch-speaking Flemings of the north and the French-speaking Walloons of the south have led in recent years to constitutional amendments granting these regions formal recognition and autonomy.

Location : Western Europe, bordering the North Sea, between France and the Netherlands.
Country name: Koninkrijk Belgie / Royaume de Belgique.
Capital : Brussels.
Provinces : Capitol Region Brussel + 10 provinces; Antwerpen, Brabant Wallon, Hainaut, Liege, Limburg, Luxembourg, Namur, Oost-Vlaanderen, Vlaams Brabant, West-Vlaanderen.
Military : The Belgian Forces consist of the following branches: Military Army, Navy, Air Force, National Gendarmerie, Medical Service.
Intelligence: See hereafter.

::: Ministerial Intelligence and Security Committee

Official name in Dutch (Flemish) and French:

MCIV - Ministerieel Comit  voor Inlichting en Veiligheid

CMRS - Conseil Ministeriel du Renseignement et de la S curit 

The committee is presided by the prime Minister and consist of the

Ministers of Interior, Foreign Affairs, and Defense.

The MCIV sets intelligence and security priorities and approves the groups to be investigated.

::: State Security Service

Official name in Dutch (Flemish) and French:

SVD - Staats Veiligheids Dienst

SE - Suret  de l'Etat

The SVD is the domestic security service under the Ministry of Interior. The SVD is responsible for countering threats to Belgium, including terrorism and espionage.

::: General Intelligence and Security Service

Official name in Dutch (Flemish) and French:

ADIV - Algemene Dienst Inlichtingen en Veiligheid

SGR - Service G n ral du Renseignement et de la S curit 

ADIV is the military intelligence service which has two "domains" and some special tasks:

- The Security Service (Domein Inlichtingen), responsible for military counter espionage and counter intelligence.

ADIV's mission is to collect, analyse and process intelligence that is important for the safety of the country. The service is responsible for the collection of both strategic and operational intelligence from abroad.

The strategic information is collected for the Chiefs of Staff, the Military House of the King, the Prime Minister, Minister of Defense, and the Minister of Foreign Affairs.

The operational information is collected for the staff sections and the commanders of the Belgian forces.

The Belgian law from 30 June 1994, that forbids eavesdropping does also apply to ADIV. The service is however allowed to monitor military radio transmissions from abroad.

- The Intelligence Service (Domein Veiligheid) collects domestic and foreign intelligence.

The ADIV is responsible for the safety of personnel of the Ministry of Defense, the military equipment, weapons, documents, IT and

communication systems. This includes not only the Belgian forces and bases in Belgium, but also NATO forces/bases in Belgium and Belgian forces abroad.

- Special tasks.

The Centre for Historical Documentation (Centrum voor Historische Documentatie) is also maintained by the ADIV. These are the archives of the Belgian forces since 1914.

The ADIV is also coordinates the contacts with foreign defense attachés. It has a special Liaison Section for this task.

::: Rijkswacht / Gendarmerie

The Rijkswacht is a paramilitary force under the Ministry of Interior and is responsible for internal security.

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LUXEMBOURG

::: General information.

Founded in 963, Luxembourg became a grand duchy in 1815 and an independent state under the Netherlands. It lost more than half of its territory to Belgium in 1839, but gained a larger measure of autonomy. Full independence was attained in 1867. Overrun by Germany in both World Wars, it ended its neutrality in 1948 when it entered into the Benelux Customs Union and when it joined NATO the following year. In 1957, Luxembourg became one of the six founding countries of the European Economic Community (later the European Union) and in 1999 it joined the euro currency area.

Location : Western Europe, between France and Germany.

Country name: Grand Duche de Luxembourg.

Capital : Luxembourg.

Districts : 3; Diekirch, Grevenmacher, Luxembourg.

Military : Military Army; note - the government abolished the Gendarmerie.

Intelligence: See hereafter.

Very little is known about Luxembourg's Intelligence and Security services. Info is always welcome.

The Ministry of State has two Intelligence and Security services; the SRDE and HCSE, while the military "Deuxieme Bureau de l'Armée" is the responsibility of the Ministry of Defense.

- National Intelligence Agency

SRDE - Service de Renseignements de l'Etat

- High Commission for Foreign Security

HCSE - Haute Commissariat de la S curit  Ext rieure

- Military Intelligence and Security Agency

Deuxieme Bureau de l'Arm e

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Selected sources and reading:

- ADIV <http://www.mil.be/hqgen/sgr/sgrnl.htm>

- Brassey's International Intelligence Yearbook

- Spy Book - The encyclopedia of espionage

- Federation of American Scientists (FAS) <http://www.fas.org>

- CIA World Factbook

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★ INTELLIGENCE NEWS ★

::: SPY GALORE

WorldNetDaily.com reports that "an unprecedented worldwide gathering of spy chiefs, including representatives of the CIA, FBI and Britain's MI5, has just taken place in St. Petersburg, Russia, according to the Italian news daily La Stampa."

Over 100 chiefs from intelligence agencies in 39 nations gathered in St. Petersburg. The conference agreed to establish a permanent international intelligence organization to coordinate anti-terror efforts, according to the Voice of Russia World Service.

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::: SPY STORIES ON THE WEB

China sentences American to 5 years in prison, U.S. Embassy says.
<http://www.nandotimes.com/world/story/315824p-2703375c.html>

The spies who came in from the art sale
<http://atlanta.creativeloafing.com/fishwrapper.html>

The CIA In Kurdistan
<http://www.zmag.org/zmag/articles/dec96kurdi.htm>

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* LOGS SECTION *

Only 345 logs this month. Where are the good old days when we had over 1000 logs each month? A big THANK YOU to those who contributed their logs.

2800.0	M22	4XZ, Israeli Navy Haifa with V-marker CW 01-02-2002 Fri 0730 (TY)
3195.0	JJT44	"JJT88 DE JJT44 QRK 4 K ", presumed Japanese military net CW 08-02-2002 Fri 1800 (TY)
3195.0	MX	Channel marker R, Izhevsk, Russia CW 20-02-2002 Tue 0658 (TY)
3200.0		HAARP AM 25-03-2002 Mon 0900 (TP)
3330.0	2SLC	"V MW3D DE 2SLC" over and over CW 25-02-2002 Mon 2116 (TY)
3340.0	MX	Channel marker L, St. Petersburg, Russia CW 24-02-2002 Sun 2146 (TY)
3380.0	4XML	"V BFR7 DE 4XML" over and over CW 08-02-2002 Fri 2315 (TY)
3419.0	U849	Unid station repeating "U849"over and over CW 01-02-2002 Fri 2127 (TY)
3536.5	L9CC	"V CP17 DE L9CC" over and over CW 26-02-2002 Mon 0710 (TY)
3543.5	L9CC	"V CP17 DE L9CC" over and over CW 17-02-2002 Sun 2138 (TY)
3551.0	EVX	Repeating "VVV EVX"intemittently CW 02-02-2002 Sun 2128 (TY)
3551.0	L9CC	"V CP17 DE L9CC" over and over CW 12-02-2002 Tue 2136 (TY)
3554.0	L9CC	"V CP17 DE L9CC" over and over CW 01-02-2002 Sat 2140 (TY)
3556.0	L9CC	"V CP17 DE L9CC" over and over CW 11-02-2002 Mon 2150 (TY)
3561.0	L9CC	"V CP17 DE L9CC" over and over CW 15-02-2002 Fri 2117 (TY)
3575	M13	510 CW 23-03-2002 Sat 2200 (HFD)
3575	M13A	510/000 CW 09-03-2002 Sat 2200 (HFD)
3658.0	MX	Channel marker V, Khiva, Uzbekistan CW 24-02-2002 Sun 2142 (TY)
4028.0	V02a	USB 16-03-2002 Sat 0300 (TP)
4071.5	M21	BT99 sequence, Russian Air Defense, pseudo-ts CW 19-02-2002 Tue 2122 (TY)
4073	M18	Time marker 0154 0155 0156 etc. UTC+3 CW 24-03-2002 Sun 2254 (AB)
4173.0	M08a	(in progress-missed callup) CW 31-03-2002 Sun 1108
4241.0	M22	4XZ, with V-marker CW 15-02-2002 Fri 2150 (TY)
4326.0	MX	Channel marker R, Izhevsk, Russia CW 24-02-2002 Sun 2145 (TY)
4331.0	M22	4XZ, with V-marker CW 15-02-2002 Fri 2150 (TY)
4360.0	E10	CI02 USB 20-03-2002 Wed 0447 (JSI)
4382	M13	346 CW 26-03-2002 Tue 2200 (HFD)
4382	M13	346 CW 27-03-2002 Wed 2200 (HFD)
4415.0	B7UA	"V GM1W DE B7UA" over and over CW 15-02-2002 Fri 2133 (TY)
4454	S21	454-###2/54=5#7#5 LSB nothing to hear on 4854 AM 26-03-2002 Tue 1842 (HFD)
4461.0	E10	FTJ Group 75 USB 14-03-2002 Thu 0100 (JSI)
4461.0	E10	In progress. USB 24-03-2002 Sun 2305 (JSI)

4494.0 M13 378 (too weak for copy) CW 04-03-2002 Mon 2200 (MS)
 4498.5 MX Channel marker V, Khiva, Uzbekistan CW 12-02-2002 Tue 2131 (TY)
 4555 M45 555-792/34=53765 4955 stronger //4955 CW 07-03-2002 Thu 1802 (HFD)
 4700.0 M82 Presumed BML, M82, North Korean Intel in progress, with 5FG's. CW 11-02-2002 Sun 1205 (TY)
 4700.0 M82 VVV JVG DE BML, QTA? QTC50C. North Korean Intel. CW 26-02-2002 Tue 2200 (TY)
 4700.0 M82 VVV JVG DE BML, QTA5 QSA? QTC50C. North Korean Intel. CW 26-02-2002 Tue 2300 (TY)
 4771.5 L4FC "V IBEH DE L4FC" over and over CW 08-02-2002 Fri 2305 (TY)
 4783 M23 555 555 555 437 437 etc CW 19-03-2002 Tue (SA)
 4785 M10 555:799-01/27= 99436 238-... CW 17-03-2002 Sun 2100 (HFD)
 4792 G06 436-588/47=78563 AM 01-03-2002 Fri 1930 (HFD)
 4874.0 NH8T "V LA5H DE NH8T" over and over CW 01-02-2002 Mon 2150 (TY)
 4880.0 E10 In Progress. Moving fast tonight. USB 01-03-2002 Fri 0210 (JSI)
 4880.0 E10 ULX AM 02-03-2002 Sat 0400 (MDC)
 4880.0 E10 In progress USB 12-03-2002 Tue 0210 (JSI)
 4880.0 E10 ULX2 USB 26-03-2002 Tue 0333 (JSI)
 4955 M45 555-792/34=53765 4955 stronger //4555 CW 07-03-2002 Thu 1802 (HFD)
 5017 M01 463-527/36=74885 CW 05-03-2002 Tue 2000 (HFD)
 5017 M01 463-943/30=96370 no EoM transm. CW 28-03-2002 Thu 2000 (HFD)
 5121 CH8N Czech mil. CH8N 5720 24 1754 = 395 A8B5 = (5FGs) = CH8N K. CW 24-03-2002 Sun 1655 (RGA)
 5134.0 M08a (in progress-missed callup) CW 17-03-2002 Sun 1200
 5154.0 MX Channel marker K, Peteropavrovsk Kam., Russia CW 09-02-2002 Sat 2116 (TY)
 5159.0 M22 4XZ, Haifa, Israeli Navy, with V marker//4331//6379//8103//10046//12984 CW 10-02-2002 Sun 1925 (TY)
 5170 E10 Israeli Intel. VLB2Z77 AM 19-03-2002 Tue 0449 (JSI)
 5170.0 E10 VLB2 Z77 ... still going at 0505 USB 20-03-2002 Wed 0449 (JSI)
 5233 M51 nr 71 M 23:23:18 2002 = 5LGs CW 28-03-2002 Thu 2223 (RGA)
 5288 M13 411 CW 16-03-2002 Sat 2130 (HFD)
 5288 M13 id 411 CW 17-03-2002 Sun 2130 (AB)
 5288 M13 411 CW 17-03-2002 Sun 2130 (HFD)
 5371.0 M21 BT99 sequence, Russian Air Defense, pseudo-ts CW 25-02-2002 Mon 2112 (TY)
 5372.0 M21 BT99 sequence, Russian Air Defense, pseudo-ts CW 19-02-2002 Tue 2121 (TY)
 5383.0 NH8T "V LA5H DE NH8T" over and over CW 25-02-2002 Mon 2115 (TY)
 5419.0 M08a (in progress, missed calls) CW 23-03-2002 Sat 0200
 5422.0 E03 LP. USB 24-03-2002 Sun 2200 (JSI)
 5423.0 L9CC "V CP17 DE L9CC" over and over CW 18-02-2002 Mon 2059 (TY)

5435 E10 Tentative E10. In progress AM 24-03-2002 Sun 1645
5435.0 E10 In progress USB 09-03-2002 Sat 0138 (JSI)
5435.0 E10 Very clear. Group 73 66 USB 12-03-2002 Tue 0211
5435.0 E10 Alpha Romeo Tango repeated for 5 minutes before
message. Getting QRM from a digital station AM
14-03-2002 Thu 2330 (QDZ)
5435.0 E10 In progress. USB 24-03-2002 Sun 2308 (JSI)
5450.0 YL reading 5 fig groups. Very heavy QRM w/ some QRN.
In progress. USB 24-03-2002 Sun 0305 (TP)
5465 MX Channel marker R, Izhevsk, Russia CW 24-02-2002 Sun
2145 (TY)
5465 MX Russian mil Izhevsk. Channel marker "R" CW 28-03-2002
Thu 2240 (RGA)
5474 M01 463 CW 07-03-2002 Thu 1800 (HFD)
5645.0 4XML "V BFR7 DE 4XML" over and over CW 09-02-2002 Sat 1912 (TY)
5756.0 4XML "V BFR7 DE 4XML" over and over CW 01-02-2002 Fri 2140 (TY)
5756.0 NH8T "V LA5H DE NH8T" over and over CW 17-02-2002 Sun 0712 (TY)
5758.0 M08a (in progress-missed callup) CW 31-03-2002 Sun 0200
5820.0 E10 In progress USB 12-03-2002 Tue 0212 (JSI)
5876.0 (in progress w/5f traffic-sounds like M13 xmsn-long
message, TTY blocks. CW 02-03-2002 Sat 0525 (MS)
5876.0 (2nd night caught in 5f traffic for 2 1/2 hours. Very
slow morse. No calls CW 03-03-2002 Sun 0403 (MS)
5876.0 (in progress, in 5f number traffic) CW 24-03-2002 Sun
0400 (MS)
5921.5 M21 BT99 sequence, Russian Air Defense, pseudo-ts CW
18-02-2002 Tue 2123 (TY)
6270.0 E10 In Progress. Group 22 USB 14-03-2002 Thu 0105 (JSI)
6270.0 E10 Mossad YL/EE USB 19-03-2002 Tue 0500 (LAZ)
6321,5 M21 Russian Air Defense. Plots CW 24-03-2002 Sun 1743
6321,5 M21 Russian air defence. =99?23549? CW 29-03-2002 Fri 2054
(RGA)
6328 M13 284 CW 01-03-2002 Fri 2100 (HFD)
6328 M13 284 CW 16-03-2002 Sat 2100 (HFD)
6370.0 E10 VLB2 USB 02-03-2002 Sat 0148 (JSI)
6370.0 E10 VLB2 Z77 ? not sure, heavy interference. Still
going at 0508 USB 20-03-2002 Wed 0458 (JSI)
6379.0 M22 4XZ, with V-marker CW 15-02-2002 Fri 2150 (TY)
6506.5 L4FC "V IBEH DE L4FC" over and over CW 08-02-2002 Fri 0725 (TY)
6506.5 L4FC "V IBEH DE L4FC" over and over CW 26-02-2002 Tue 2055 (TY)
6508 M01 463 CW 10-03-2002 Sun 0700 (HFD)
6508 M01 463-310/32=07911 CW 31-03-2002 Sun 0700 (HFD)
6509,6 L4FC V IBEH de L4FC repeating CW 29-03-2002 Fri 2105 (RGA)
6529.0 V21 Babbler. USB 20-03-2002 Wed 0051 (JSI)
6565 M13 417 CW 24-03-2002 Sun 2000 (HFD)
6565 M13 417 CW 25-03-2002 Mon 2000 (HFD)
6642.0 M13 284 (R10) BT 210 24 BT CW 02-03-2002 Sat 0500 (MS)
6647.0 V08 good reception , fm vx AM 02-03-2002 Sat 1900 (JE)

6767.0 M08a ID 8.493 ----- (in progress) CW 17-03-2002 Sun
6767.0 M08a ID 38511 33142 68661 CW 31-03-2002 Sun 1200 (MS)
6797.0 M08a DGI in progress. Similar but non-parallel tx heard on
6854 kHz. CW 06-02-2002 Wed 2104 (TY)
6797.0 M08a ID 34882 13413 87223 CW 17-03-2002 Sun 1200 (MS)
6797.0 M08a ID 06873 25061 44371 CW 31-03-2002 Sun 1200 (MS)
6800.0 V02a SSYL, signal only about a three, even on longwire.
USAF transmission also heard AM 25-03-2002 Mon 0300
6817.0 E07 418/1 534/9 AM 27-03-2002 Wed 2140 (ASC)
6818 E07 418 AM 25-03-2002 Mon 2140 (HFD)
6825.0 V02a AM 12-03-2002 Tue 0900 (TP)
6838 XP msg AM 07-03-2002 Thu 2140 (HFD)
6840.0 E10 In progress USB 02-03-2002 Sat 2203 (JSI)
6840.0 E10 In Progress. USB 14-03-2002 Thu 0106 (JSI)
6842.0 E10 In progress USB 12-03-2002 Tue 0214 (JSI)
6850.0 V02a Signal weak on longwire SIO (3,3,3) In progress SSYL
AM 25-03-2002 Mon 0335 (DPS)
6850.0 V02a Signal stronger on longwire, SIO (4,5,4). SSYL AM
25-03-2002 Mon 0400 (DPS)
6855.0 V02 ID=?? In progress. Strong signal, decent audio. AM
25-03-2002 Mon 0320 (BS2)
6865.0 E06 Good signal, lots of fading AM 13-03-2002 Wed 0300
6866.0 M08a (in progress-missed callup) CW 16-03-2002 Sat 1300
6884 M13 272 CW 05-03-2002 Tue 2200 (HFD)
6884 M13 272 CW 19-03-2002 Tue 2200 (HFD)
6884.0 M13 272 (R5) BT 254 22 BT CW 19-03-2002 Tue 2200 (MS)
6906.0 E10 CI02 AM 02-03-2002 Sat 0500 (MDC)
6906.5 M21 BT99 sequence, Russian Air Defense, pseudo-ts CW
13-02-2002 Wed 0716 (TY)
6912.0 E10 CI02. Strange sound interfering that stopped when she
did. USB 02-03-2002 Sat 0150 (JSI)
6930.0 E10 MIW2. USB 01-03-2002 Fri 0218 (JSI)
6930.0 E10 MIW2 USB 12-03-2002 Tue 0215 (JSI)
6933.0 M08a DGI already in progress. Similar but non-parallel tx
heard on 7889 kHz. CW 19-02-2002 Tue 2118 (TY)
6935 E07 913/0 //8103 9368 AM 08-03-2002 Fri 0610 (HFD)
6940.0 M03 508/00 (R5) BT BT 000 CW 20-03-2002 Wed 0730 (MS)
6959.0 E03 09275 Strong Signal, No Jamming USB 01-03-2002 Fri
2200 (MDC)
6959.0 E03 LP, weak here. USB 02-03-2002 Sat 2105 (JSI)
6959.0 E03 LP, 49491 USB 02-03-2002 Sat 2201 (JSI)
6959.0 E03 LP in progress USB 15-03-2002 Fri 2218 (JSI)
6960.0 E05 797, count 170, //9090 USB 27-03-2002 Wed 2200 (ASC)
6970.0 E05 id 573 count 174 USB 02-03-2002 Sat 2100 (ASC)
6970.0 E05 In Progress. USB 02-03-2002 Sat 2120 (JSI)
6975 M13 261 CW 04-03-2002 Mon 2100 (HFD)
6975 M13 id 261 CW 18-03-2002 Mon 2000 (AB)
6982.0 6DU0 "V JS4X DE 6DU0" over and over CW 14-02-2002 Thu 2011

(TY)

6982.0	M08a	ID 21962 28563 86241 CW 03-03-2002 Sun 1300 (MS)
6982.0	M08a	ID 85493 53323 44193 CW 17-03-2002 Sun 1300 (MS)
7039.0	MX	Channel marker F, Vladivostok, Russia CW 15-02-2002 Fri 2233 (TY)
7039.0	MX	Channel marker M, Magadan CW 28-02-2002 Thu 1916 (TY)
7045.5	L9CC	"V CP17 DE L9CC" over and over CW 12-02-2002 Tue 2137 (TY)
7050.0	L9CC	"V CP17 DE L9CC" over and over CW 24-02-2002 Sun 2330 (TY)
7050.0	L9CC	"V CP17 DE L9CC" over and over CW 26-02-2002 Mon 0710 (TY)
7051.5	L9CC	"V CP17 DE L9CC" over and over CW 19-02-2002 Tue 2259 (TY)
7053.0	L9CC	"V CP17 DE L9CC" over and over CW 10-02-2002 Sun 1945 (TY)
7059.0	L9CC	"V CP17 DE L9CC" over and over CW 15-02-2002 Fri 2056 (TY)
7068.5	L9CC	"V CP17 DE L9CC" over and over CW 11-02-2002 Mon 2150 (TY)
7074.0	2SLC	"V MW3D DE 2SLC" over and over CW 01-02-2002 Fri 0745 (TY)
7310.0	NH8T	"V LA5H DE NH8T" over and over CW 17-02-2002 Sun 1813 (TY)
7320.0	M08a	(in progress, missed calls, this is definitely a harmonic on 14640m) CW 24-03-2002 Sun 1300 (MS)
7432.0	M13	254 (R5) BT 2.. (QRM blocks) CW 20-03-2002 Wed 2200
7555.0	V02a	QRM from hams USB 24-03-2002 Sun 0300 (TP)
7556.0	M08a	DGI in progress. Similar but non-parallel transmission heard on 10446 kHz. CW 02-02-2002 Sun 1730 (TY)
7608	XP	msg AM 07-03-2002 Thu 2120 (HFD)
7609	XP	0-msg AM 05-03-2002 Tue 2120 (HFD)
7630.0	HHH	Unid station repeating "HHH" over and over CW 13-02-2002 Wed 2138 (TY)
7668.0	M16	8BY //10248 CW 15-02-2002 Fri 2140 (TY)
7760.0	E10	In Progress. USB 14-03-2002 Thu 0108 (JSI)
7770.0	M23	555 (R10) CW 01-03-2002 Fri 2200 (MS)
7770.0	M23	555 (R10) CW 02-03-2002 Sat 0300 (MS)
7770.0	M23	555 (R10) // freq on 8160m CW 02-03-2002 Sat 2200 (MS)
7770.0	M23	555 (R10) CW 03-03-2002 Sun 2200 (MS)
7770.0	M23	555 (R10) // freq on 8160m CW 04-03-2002 Mon 2200 (MS)
7770.0	M23	555 (R10) CW 08-03-2002 Fri 2200 (MS)
7770.0	M23	555 (R10) // freq on 8160m CW 09-03-2002 Sat 2200 (MS)
7770.0	M23	555 (R10) CW 10-03-2002 Sun 2200 (MS)
7788.0	M31	VVVx5 DE FDGx3 AR (repeats many times) CW 05-03-2002 Tue 0820 (MS)
7860.0	V02	Atencion 962 08 08 61 into groups AM 03-03-2002 Sun 1109 (CS)
7862.0	V02a	(in progress-missed callup, harmonic freq on 15724m) AM 31-03-2002 Sun 1100 (MS)
7864.0	3SP	Repeating "V CQ DE 3SP ZNN"intermittently CW 02-02-2002 Sun 1803 (TY)
7889.0	M08a	DGI already in progress. Similar but non-parallel tx heard on 6933 kHz. CW 19-02-2002 Tue 2117 (TY)
7890.0	M08a	ID 34881 13412 87222 CW 16-03-2002 Sat 1300 (MS)
7918.0	E10	YHF1 USB 01-03-2002 Fri 0202 (JSI)
7918.0	E10	Faint. USB 09-03-2002 Sat 0147 (JSI)

7918.0 E10 In Progress USB 12-03-2002 Tue 0217 (JSI)
7960.0 M23 310 (R10) CW 01-03-2002 Fri 0200 (MS)
7960.0 M23 310 (R10) CW 02-03-2002 Sat 0200 (MS)
7960.0 M23 310 (R10) CW 04-03-2002 Mon 0200 (MS)
7960.0 M23 555 (R10) CW 05-03-2002 Tue 0300 (MS)
7960.0 M23 310 (R10) CW 31-03-2002 Sun 0200 (MS)
7995 M13A 158/000 CW 11-03-2002 Mon 2100 (HFD)
8042.0 NH8T "V LA5H DE NH8T" over and over CW 08-02-2002 Fri 0744 (TY)
8097.0 V02a (in progress-YL/SS) AM 02-03-2002 Sat 0622 (MS)
8098.0 M08a cuban cut numbers CW 17-03-2002 Sun 0700 (BM)
8103 E07 913/0 //6935 9368 AM 08-03-2002 Fri 0610 (HFD)
8103.0 M22 4XZ, with V-marker CW 15-02-2002 Fri 2150 (TY)
8122 XP msg AM 05-03-2002 Tue 2150 (HFD)
8136.0 M08a ID 01181 69532 32232 (harmonic freq on 16272m) CW
31-03-2002 Sun 0900 (MS)
8160.0 M23 310 (R10) CW 01-03-2002 Fri 0130 (MS)
8160.0 M23 555 (R10) // freq on 7770m CW 02-03-2002 Sat 2200 (MS)
8160.0 M23 310 (R10) CW 04-03-2002 Mon 0130 (MS)
8160.0 M23 555 (R10) // freq on 7770m CW 04-03-2002 Mon 2200 (MS)
8160.0 M23 555 (R10) // freq on 7770m (QRM bad on 8160m) CW
09-03-2002 Sat 2200 (MS)
8160.0 M23 310 (R10) CW 19-03-2002 Tue 0130 (MS)
8185 E07 418 AM 25-03-2002 Mon 2120 (HFD)
8185.0 E07 418/1 534/9 AM 27-03-2002 Wed 2120 (ASC)
8185.0 M12 491x3 1 (R2) (note: xmtr was very garbled. Strong
echo) CW 01-03-2002 Fri 2200 (MS)
8186.0 M08a ID 00362 80831 .6061 CW 16-03-2002 Sat 0800 (MS)
8186.0 M3 624/00 (R5) BT BT (M8a blocking at this time) CW
16-03-2002 Sat 0800 (MS)
8187 M03 624/00 CW 30-03-2002 Sat 0800 (HFD)
8187.0 Cut Numbers - in progress @ 0506 CW 19-03-2002 Tue
0500 (LAZ)
8187.0 M08a (in progress, missed calls) CW 23-03-2002 Sat 0700
8189.5 4XML "V BFR7 DE 4XML" over and over CW 26-02-2002 Tue 2312 (TY)
8190 S17C 10033 AM 02-03-2002 Sat 1250 (HFD)
8190 S17C 99035 AM 03-03-2002 Sun 1250 (HFD)
8190 S17C 96034 AM 09-03-2002 Sat 1250 (HFD)
8190 S17C 98035 AM 10-03-2002 Sun 1250 (HFD)
8190 S17C 99035 AM 17-03-2002 Sun 1250 (HFD)
8190 S17C 93032 AM 23-03-2002 Sat 1250 (HFD)
8190 S17C 93033 AM 24-03-2002 Sun 1250 (HFD)
8190 S17C 93036 AM 29-03-2002 Fri 1250 (HFD)
8190.0 S17c USB 17-03-2002 Sun 1250 (AF)
8260.0 M40 VVV CQ747.360, North Korean Intel. CW 01-02-2002 Sun
1900 (TY)
8307.0 M23 579 (R10) // freq on 9285m CW 04-03-2002 Mon 0800 (MS)
8307.0 M23 579 (R10) //freq on 9285m CW 21-03-2002 Thu 0800 (MS)
8308.0 4XML "V BFR7 DE 4XML" over and over CW 09-02-2002 Sat 1912 (TY)

8338.0 Unid pips CW 11-02-2002 Sun 1708 (TY)
 8360 YSAM Russian Military. Callup HTEP NGLH CUDS. Exchange QSAs
 CW 29-03-2002 Fri 2135 (RGA)
 8495.0 MX Channel marker F, Vladivostok, Russia CW 18-02-2002
 Mon 1918 (TY)
 8495.0 MX Channel marker M, Magadan CW 28-02-2002 Thu 2007 (TY)
 8678.0 V02 In progress AM 27-03-2002 Wed 0200 (TP)
 8752.0 V02 "0550...0550...0550..." AM 17-03-2002 Sun 0500 (TP)
 8909 V02a in progress AM 26-03-2002 Tue 0608
 8909.0 V02a Deep fades and heavy hum AM 26-03-2002 Tue 0006
 (VAMBO)
 9012.0 M13 823 (R5) BT 210 2. BT CW 20-03-2002 Wed 0700 (MS)
 9064.0 M08a cuban cut numbers; in progress CW 17-03-2002 Sun 0717 (BM)
 9071.0 CN9R "V HNR2 DE CN9R" over and over CW 08-02-2002 Fri 1800 (TY)
 9090.0 E05 Very faint, in progress. USB 25-03-2002 Mon 2216 (JSI)
 9090.0 E05 797, count 170, //6960 USB 27-03-2002 Wed 2200 (ASC)
 9090.0 E06 304x3 00000 AM 09-03-2002 Sat 2100 (JE)
 9130.0 E10 In Progress. USB 14-03-2002 Thu 0110 (JSI)
 9140 XP 0-msg AM 05-03-2002 Tue 2100 (HFD)
 9140 XP msg AM 07-03-2002 Thu 2100 (HFD)
 9142.0 E17 Male Voice, 5F TFC, Rpts Each Gp, Cut in and Dropped
 early AM 14-03-2002 Thu 0210 (BS4)
 9153.0 V02a V2a with transmitter in CW mode instead of AM. CW
 09-03-2002 Sat 0726 (BM)
 9230.0 V02 Spanish Lady YL/SS - I.D. 63803 AM 18-03-2002 Mon 1000
 (LAZ)
 9238 M08a AGUGA DTNMF RRMTA CW 15-03-2002 Fri 0912 (GH2)
 9238.0 M08a DGI already in progress CW 11-02-2002 Sun 1812 (TY)
 9239.0 M08a (in progress-missed callup) CW 31-03-2002 Sun 1110
 9251.0 E03 LP. Jamming in progress USB 02-03-2002 Sat 2200 (JSI)
 9285.0 M23 579 (R10) // freq on 8307m CW 04-03-2002 Mon 0800 (MS)
 9285.0 M23 579 (R10) //freq on 8307m CW 21-03-2002 Thu 0800 (MS)
 9295.0 M31 VVVx3 de FDI8x3 AR CW 04-03-2002 Mon 2226 (MS)
 9323.0 M08a DGI in progress CW 26-02-2002 Tue 1905 (TY)
 9323.0 M08a DGI in progress CW 28-02-2002 Thu 1917 (TY)
 9368 E07 913/0 //6935 8103 AM 08-03-2002 Fri 0610 (HFD)
 9420 E07 418/0 AM 04-03-2002 Mon 2100 (HFD)
 9475 XP msg AM 05-03-2002 Tue 2130 (HFD)
 9946 M13 517 CW 05-03-2002 Tue 2000 (HFD)
 9946 M13 id 517 CW 18-03-2002 Mon 2000 (AB)
 9946.0 M13 517 (R5) BT 215 21 BT CW 19-03-2002 Tue 2100 (MS)
 10046.0 M22 4XZ, Haifa, Israeli Navy, with V-marker//8103//12984
 CW 01-02-2002 Fri 2140 (TY)
 10110.0 M23 555 (R10) // freq on 11220m CW 02-03-2002 Sat 0230
 10126.0 M08a DGI already in progress CW 14-02-2002 Thu 1809 (TY)
 10143.0 M13 714 (R5) BT 210 21 BT CW 28-03-2002 Thu 2100 (MS)
 10214 M13 253 CW 22-03-2002 Fri 2200 (HFD)
 10214.0 M13 253 (R5) BT 213 21 BT CW 21-03-2002 Thu 2100 (MS)

10214.0 M13 253 (R5) BT 213 21 BT CW 22-03-2002 Fri 2100 (MS)
10220.0 M23 000 (R10) CW 05-03-2002 Tue 0330 (MS)
10220.0 M23 000 (R10) CW 31-03-2002 Sun 0330 (MS)
10248.0 M16 8BY Saint Assise. "VVV 8BY followed by 3FGs //14931 CW
17-02-2002 Sun 2140 (TY)
10250.0 M23 310 (R10) // freq on 11020m CW 01-03-2002 Fri 0100
10250.0 M23 310 (R10) // freq on 11020m CW 04-03-2002 Mon 0100
10345.0 M08a Repeating "UUUWN", DGI, similar but non-parallel tx
heard on 10446 kHz CW 19-02-2002 Tue 2002 (TY)
10393 M42 FAPSI in progress. ITA-5 based ARQ-system
100.17Bd/500Hz, 5FGs to unlocated embassy, link ID
not copied, bursty txc., 11-bit per char., 75 chars
per burst, ctrl char. every 9th character 16-03-2002
10822.0 4XML "V BFR7 DE 4XML" over and over CW 09-02-2002 Sat 1912 (TY)
10872.0 MX Channel marker S, Arkhangelsk CW 24-02-2002 Sun 2140 (TY)
10872.0 MX Channel marker K Peteropavrovsk Kam CW 28-02-2002 Thu
1915 (TY)
10972 XP msg AM 05-03-2002 Tue 2110 (HFD)
11020.0 M23 310 (R10) // freq on 10250m CW 01-03-2002 Fri 0100
11020.0 M23 310 (R10) CW 03-03-2002 Sun 0100 (MS)
11020.0 M23 310 (R10) CW 03-03-2002 Sun 1700 (MS)
11020.0 M23 310 (R10) // freq on 10250m CW 04-03-2002 Mon 0100
11170 M42 Dep. of State Comms Moscow, offline crypto to FWL with
5LGs after 11177 00096, bad link, QSX 15634 and
later 14375 kHz MFSK-32/CROWD36 29-03-2002 Fri 2314
11220.0 M23 555 (R10) // freq on 10110m CW 02-03-2002 Sat 0230
11431.0 M08 Cuban Cut Numbers - in progress @ 0506 CW 19-03-2002
Tue 0500 (LAZ)
11545 E03 LP id 49491 USB 09-03-2002 Sat 2200 (MADX)
11545.0 E03 LP, very weak. Could barely make out music. USB
02-03-2002 Sat 2101 (JSI)
11545.0 E03 LP, 49491? USB 02-03-2002 Sat 2204 (JSI)
11565.0 E10 Very Faint USB 01-03-2002 Fri 0206 (JSI)
11565.0 E10 Mossad YL/EE - EZI2 USB 19-03-2002 Tue 0500 (LAZ)
12170 M42 Dep. of State Comms Moscow, offline crypto to FWL
with 5LGs after 11177 00096, bad link QSX 14375 and
15634 kHz MFSK-32/CROWD36 29-03-2002 Fri 2233 (LD0)
12210.0 S06 351-207/64 04576 full carrier AM 09-03-2002 Sat 1800
12215.0 Numbers in Spanish AM 21-03-2002 Thu 0002 (ARI)
12220.0 M23 310 (R10) CW 02-03-2002 Sat 0430 (MS)
12220.0 M23 310 (R10) // freq on 13140m CW 03-03-2002 Sun 0430
12220.0 M23 310 (R10) CW 31-03-2002 Sun 0430 (MS)
12280 V02 AM 04-03-2002 Mon 0200 (AR3)
12570 S17c USB 16-03-2002 Sat 1250 (AF)
12984.0 M22 4XZ, Haifa, Israeli Navy, with V-marker//8103//10046
CW 01-02-2002 Fri 2140 (TY)
13004 OLZ2 Russian Mil wkg BDZX and JBQ6, who answer on 13844 CW
14-03-2002 Thu 0421 (JC5)

13140.0 M23 310 (R10) // freq on 12220m CW 03-03-2002 Sun 0430
13375 E03 LP in progress USB 08-03-2002 Fri 1711 (RGA)
13520 E06 584-709/133=72915 AM 02-03-2002 Sat 1330 (HFD)
13520.0 E06 AM 03-03-2002 Sun 1330 (ASC)
13520.0 E06 repeat of 1230z AM 16-03-2002 Sat 1330 (AF)
13521.0 E06 584 917 230 AM 16-03-2002 Sat 1330 (ASC)
13528.0 MX Channel marker F, Vladivostok, Russia CW 18-02-2002
Mon 1918 (TY)
13528.0 MX Channel marker M, Magadan CW 28-02-2002 Thu 1917 (TY)
13533.0 E10 Mossad YL/EE - EZI2 USB 19-03-2002 Tue 0500 (LAZ)
13852 QYVG Russian M1 wkg TP8P XMSC AVGJ CIEF 4EIU YEFA AOS7 C95U
4FDV CW 07-03-2002 Thu 0230 (JC5)
13853 IP5Y Russian Mil wkg 4SC2, 7I3P, NNPR, L38N, OROD, A5KZ,
X2AK, G6MG, FBFK, later sent tfc to A5KZ CW 14-03-2002
Thu 0531 (JC5)
13975 RAL2 Russian navy wkg RFH2, RHW2, RDU2, RBL62. CW
14-03-2002 Thu 0503 (JC5)
14375 M42 FWL: UNID Russian embassy, op chat to Moscow on link
00096, QSX 12170 kHz MFSK-32/CROWD36 29-03-2002 Fri
2252 (LDO)
14487.0 E03 Lincolnshire Poacher YL/EE - I.D. 36572 USB 21-03-2002
Thu 1200 (LAZ)
14620.0 S06 351-207/64 reduced carrier AM 09-03-2002 Sat 1700
14640.0 M08a ID 61213 76701 19551 CW 03-03-2002 Sun 1300 (MS)
14640.0 M08a ID 34882 13413 87223 (repeat of 1200z sked on 6797m)
CW 17-03-2002 Sun 1300 (MS)
14640.0 M08a (in progress, missed calls, this is definitely a
harmonic on 7320m) CW 24-03-2002 Sun 1300 (MS)
14739.0 E05 528, count 215, //16198 USB 29-03-2002 Fri 1500 (ASC)
14871 M42 FAPSI. Msg on link 80038 + ops chat RTTY 25-03-2002
Mon 1456 (LAR)
14871 X06 FAPSI. Mazielka call AM 25-03-2002 Mon 1443 (LAR)
14931.0 M16 8BY //102284 CW 20-02-2002 Tue 0659 (TY)
15634 M42 FWL: UNID Russian embassy, op chat to Moscow on link
00096, QSX 12170 kHz MFSK-32/CROWD36 29-03-2002 Fri
2240 (LDO)
15724.0 V02a (in progress-missed callup, harmonic of 7862m at
1100z) AM 31-03-2002 Sun 1100 (MS)
15880.0 E06 584 917 230 85777... AM 17-03-2002 Sun 1230 (AF)
15882.0 E06 AM 03-03-2002 Sun 1230 (ASC)
15890 E06 584-709/133=72915 AM 02-03-2002 Sat 1230 (HFD)
15890.0 E06 AM 16-03-2002 Sat 1230 (ASC)
15891.0 E06 584 917 210 85777..." AM 16-03-2002 Sat 1230 (AF)
16082 M42 Dep. of State Comms Moscow, 5LGs to unlocated embassy,
link ID not copied RTTY 29-03-2002 Fri 1714 (LDO)
16198.0 E05 528, count 215, //14739 USB 29-03-2002 Fri 1500 (ASC)
16272.0 M08a ID 01181 69532 32232 (harmonic of 8136m at 0900z) CW
31-03-2002 Sun 0900 (MS)

16332.0 MX Channel marker F, Vladivostok, Russia CW 11-02-2002
 Sun 1255 (TY)
 16940 M23 310 repeated CW 27-03-2002 Wed 1438 (RGA)
 18060 M42 FAPSI. RTTY 12-03-2002 Tue 1446 (RGA)
 18306.0 V02a? Possible V2a with transmitter in CW mode instead of
 AM; faint. CW 09-03-2002 Sat 0727 (BM)
 18415.0 M16 8BY, French Intel, Saint Assise. "VVV 8BY followed by
 3FGs //14931 CW 19-02-2002 Tue 2240 (TY)
 18864.0 E04 Uncertain if E3 or E4, in progress USB 21-03-2002 Thu
 1200 (LAZ)
 20048.0 MX Channel marker S, Arkhagelsk, Russia CW 18-02-2002 Mon
 1917 (TY)
 20429 XPH 0-msg AM 23-03-2002 Sat 1250 (HFD)
 20946 M16 DGSE "8BY" CW 27-03-2002 Wed 1543 (RGA)
 21864 XPH 0-msg AM 23-03-2002 Sat 1230 (HFD)
 21866 E03 LP in progress USB 14-03-2002 Thu 1320 (PILE)
 23461.0 E04 Uncertain if E3 or E4, in progress USB 21-03-2002 Thu
 1200 (LAZ)

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